

**Uniendo a Puerto Rico Fund
Connect USVI Fund
Stage 2 Fixed Support
Application Form**

Estimated Time Per Response: 80 hours

August 2020

Read the instructions thoroughly before completing this form. Failure to comply may cause your application for Stage 2 support to be disqualified.

1 Date Submitted: 09/03/2020		
Applicant Information		
2 Applicant Legal Classification		
<input type="radio"/> Consortium <input checked="" type="radio"/> Corporation <input type="radio"/> General Partnership <input type="radio"/> Government Entity <input type="radio"/> Individual <input type="radio"/> Limited Liability Company		
<input type="radio"/> Limited Liability Partnership <input type="radio"/> Limited Partnership <input type="radio"/> Trust <input type="radio"/> Unincorporated Association <input type="radio"/> Other: _____		
3 Entity Name Puerto Rico Telephone Company, Inc.		
4 FCC Registration Number (FRN) 0001731470		
5 Jurisdiction of Formation Puerto Rico		
6 Address Line 1 1515 FD Roosevelt Avenue		
7 Address Line 2 12th Floor		
8 City Guaynabo	9 State PR	10 Zip Code 00921
11 Phone (787) 792-9399 Ext. 12 Email fsilva@claropr.com		
Contact Information		
13 Name Carlos D. Ruiz-Mantilla		
14 Organization Puerto Rico Telephone Company, Inc.		
15 Address Line 1 1515 FD Roosevelt Avenue		
16 Address Line 2 10th Floor		
17 City Guaynabo	18 State PR	19 Zip Code 00921
20 Phone (787) 792-9399 Ext. 21 Email cruiz2@claropr.com		
Agreements		
<p>If the applicant has entered into one or more agreements relating to the applicant's application, identify each agreement relating to the participation of the applicant in the competitive proposal process by providing an identifying name for each agreement, the name of each party to the agreement, and the type of agreement. Attach a separate exhibit that briefly describes all disclosed agreements.</p>		
22 Agreements		
Agreement Identifier	Agreement Type	Name of Party

Ownership Information

For each Disclosable Interest Holder, complete and attach a Schedule A. If there are any Disclosable Interest Holders with indirect ownership of the applicant, attach a separate exhibit showing the relationship between those Disclosable Interest Holders and the applicant. If there is insufficient space to provide complete lists of Disclosable Interest Holders and FCC-Regulated Businesses below, provide those lists in attachments to this form. See 47 C.F.R. §§ 1.2112(a), 54.315(a)(1).

23 Disclosable Interest Holders

24 FCC-Regulated Businesses (Held by Applicant)

Required Attachments

25 Operational History

To be eligible for participation in Stage 2 Competition, the applicant must have provided voice and/or broadband service in the territory where it is seeking Uniendo a Puerto Rico and/or Connect USVI Stage 2 fixed support since at least the time period required for filing the June 2018 FCC Form 477. In an exhibit to this application, describe the number of years it has been operating and identify the services it has provided.

26 ETC Designation

Is the applicant designated as an eligible telecommunications carrier (ETC)?

- Yes, the applicant has already been designated as an ETC in the areas where it is seeking Uniendo a Puerto Rico and/or Connect USVI Stage 2 fixed support. The relevant designation order is attached to this application.
 - No, the applicant has not been designated as an ETC in the areas where it is seeking Uniendo a Puerto Rico or Connect USVI Stage 2 fixed support. *Please select one of the following regarding the applicant's current status as of the application filing date.*
 - The applicant is in the process of applying for ETC designation in the relevant areas, and will submit the designation order and accompanying certification to the Commission upon being designated as an ETC.
 - The applicant has not yet applied for ETC designation in the relevant areas, but acknowledges that, if selected, it must obtain ETC designation within 60 days after public notice of selection to receive fixed support. Any entity that is awarded support but fails to obtain ETC designation within sixty (60) days shall be considered in default and will not be eligible to receive high-cost funding. See 47 C.F.R. § 54.1505.

27 Financial Qualifications and Project Funding Documentation

In an attachment to this application form, describe how the required construction will be funded, including financial projections that demonstrate the applicant's ability to cover the necessary debt service payments over the life of a loan, if any. An applicant may choose to submit unaudited or audited financial statements from the prior fiscal year to support its application.

28 Network Plan, Technology Description and System Design Documentation

- Initial Overview.** In an attachment to this application form, provide at a high level how the applicant will meet its Stage 2 public interest obligations for the relevant performance tier and latency combination(s) using Stage 2 support, for example, building a new network, expanding an existing network, or deploying new or existing technology.
- Detailed Description.** In an attachment to this form, describe how the technology and system design the applicant intends to use will deliver voice and broadband service, including a network diagram which must be certified by a professional engineer. The professional engineer must certify that the network is capable of delivering, to 100 percent of the locations in each minimum geographic area, voice and broadband service that meets the requisite performance requirements. See 47 C.F.R. § 54.309.
- Entities proposing to use wireless technologies also must provide a description of their spectrum access in the areas for which they seek support and demonstrate that they have the required licenses to use that spectrum, if applicable.

29 Price and Minimum Performance Requirements

The applicant must provide the relevant information in Schedule B to this application form related to the performance levels of its broadband service offerings for each minimum geographic area the applicant proposes to serve. The applicant must also provide in Schedule B the minimum download and upload speed, usage allowance, and latency performance for the service offerings proposed for each minimum geographic area.

30 Disaster Preparation and Response Plan

The applicant is required to submit with its application a Disaster Preparation and Response Plan (DPRP) which will be reviewed for completeness. The DPRP must address in detail and provide a description how an applicant intends to prepare for and will respond to disasters in Puerto Rico and/or the U.S. Virgin Islands according to five criteria: (1) Strengthening Infrastructure; (2) Ensuring Network Divisity; (3) Ensuring Backup Power; (4) Network Monitoring; and (5) Emergency Preparedness.

31 Letter of Credit Commitment Letter

The applicant must submit a letter from a bank acceptable to the Commission, as set forth in section 54.1508, committing to issue an irrevocable stand-by letter of credit, in the required form, to the applicant. The letter must, at a minimum, provide the dollar amount of the letter of credit and the issuing bank's agreement to follow the terms and conditions of the Commission's model letter of credit in Appendix B of the *PR-USVI Stage 2 Order*.

Certifications

By signing below, the authorized officer certifies the following statements:

1. that the applicant is in compliance with all applicable statutory and regulatory requirements for receiving Stage 2 fixed support for the Uniendo a Puerto Rico Fund or the Connect USVI Fund.
2. that the applicant or its parent company, if the applicant is a wholly owned subsidiary, has filed a FCC Form 477 as required during the relevant time period for June 30, 2018; December 31, 2018; June 30, 2019; or December 31, 2019.
3. that the applicant is financially and technically qualified to meet the public interest obligations of Section 54.1507 of Title 47 of the Code of Federal Regulations (47 C.F.R. § 54.1507) for each relevant performance tier and latency combination and in each geographic area for which it seeks support.
4. that the applicant will meet the relevant public interest obligations, including the requirement that it will offer service at rates that are equal to or lower than the Commission's reasonable comparability benchmarks for fixed wireline services offered in urban areas.
5. that the applicant will have available funds for all project costs that exceed the amount of Stage 2 fixed support authorized by the Commission to be received for the first two years of its support term.
6. that high-cost support will not be used for costs that are or will be reimbursed by other sources of support, including federal or local government aid or insurance reimbursements; and that support was not used for other purposes, such as the retirement of company debt unrelated to eligible expenditures.
7. that the applicant provided service in the territory as of June 30, 2018.
8. that the applicant acknowledges that it must be designated as an Eligible Telecommunications Carrier pursuant to section 214(e) of Title 47 of the United States Code (47 U.S.C. § 214(e)) in the area(s) in which it will receive support prior to being authorized to receive such support.
9. that the description of spectrum access in areas for which the applicant will seek support provided in this application in the Stage 2 competitive process is correct and the applicant will retain such access for at least ten (10) years after the date on which it is authorized to receive support.
10. that the applicant is in compliance with prohibited communications rules adopted by the Commission.
11. that the applicant and any party to the application are not subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988.
12. that the applicant has sole responsibility for investigating and evaluating all technical, marketplace, and regulatory factors that may have a bearing on the level of Uniendo a Puerto Rico Fund or Connect USVI Fund Stage 2 Fixed high-cost support it submits in its application, and that, if the applicant wins support, it will be able to build and operate facilities in accordance with the Uniendo a Puerto Rico Fund or Connect USVI Fund Stage 2 obligations and the Commission's rules generally.

I, the individual identified as the applicant's certifying representative below, am authorized to make these certifications on behalf of the applicant and declare under penalty of perjury that, based on all the information available to the applicant, all the information provided in or with this application, including the certification statements above, are true and correct.

32 Signature	33 Date 09/03/2020	
34 Printed Name of Authorized Officer	Francisco J. Silva	
35 Title/Position of Authorized Officer	General Counsel	
36 Phone (787) 793-8441	Ext.	36 Email fsilva@claropr.com
38 Employer	Puerto Rico Telephone Company, Inc.	

Persons willfully making false statements on this form can be punished by fine or forfeiture under the Communications Act, 47 U.S.C. Secs. 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. Sec. 1001.

FCC NOTICE FOR INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

Part 3 of the Commission's Rules authorize the FCC to request the information on this form. The purpose of the information is to determine whether applicants can meet the terms and conditions of Uniendo a Puerto Rico Fund and Connect USVI Fund Stage 2 fixed support. The information will be used by the Universal Service Administrative Company and/or the staff of the Federal Communications Commission, to evaluate this form, to provide information for enforcement and rulemaking proceedings and to maintain a current inventory of applicants. No authorization for support can be granted unless all information requested is provided. Failure to provide all requested information will delay the processing of the application or result in the application being returned without action. Information requested by this form may be made available for public inspection after the Commission staff completes its review. However, consistent with the Commission's limited information procedures in place for the Uniendo a Puerto Rico Fund and the Connect USVI Fund, certain information may be withheld from routine public inspection even after support is authorized. If a request for public inspection under the Commission's rules is made for an applicant's information, the applicant will be notified and then must justify the continued confidential treatment of the information if it objects to the disclosure.

The public reporting for this collection of information is estimated to average 80 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Act Project (3060-1274), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to pra@fcc.gov. PLEASE DO NOT SEND YOUR RESPONSE TO THIS ADDRESS.

Remember - You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-1274.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, PUBLIC LAW 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3) AND THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

**Application of Puerto Rico Telephone Company, Inc.
The Uniendo a Puerto Rico Fund, WC Docket No. 18-143
Attachment to FCC Form 5634**

Item 26 - ETC Designation

Attached is the Administrative Order issued by the Puerto Rico Telecommunications Bureau (formerly the Telecommunications Regulatory Board of Puerto Rico) on July 24, 2018 in dockets JRT-ETC-0001 and JRT-ETC-A001 approving Puerto Rico Telephone Company, Inc.'s (PRTC) application for re-designation as an eligible telecommunications carrier for the 2018-2020 period.

Pursuant to section 9.8.1 of Regulation 7795 of Puerto Rico Telecommunications Bureau, carriers must seek re-designation as an ETC every two years. PRTC's application for re-designation as an ETC for the 2020-2022 period, which was filed on July 16, 2020, is currently under review by the local regulator.

**ESTADO LIBRE ASOCIADO DE PUERTO RICO
JUNTA REGLAMENTADORA DE TELECOMUNICACIONES
DE PUERTO RICO**

**PUERTO RICO TELEPHONE
COMPANY, INC. H/N/C CLARO**

Peticionaria

CASO NÚM. JRT-ETC-0001

JRT-ETC-A001

ASUNTO: REVISIÓN BIENAL DE
DESIGNACIÓN ETC

ORDEN ADMINISTRATIVA

El 25 de noviembre de 1997, esta Junta emitió *Resolución y Orden*, en el caso 97-US-0001, donde aprobó la designación de Puerto Rico Telephone Company, Inc. h/n/c Claro (PRTC, Claro o Peticionaria) como compañía de telecomunicaciones elegible (ETC, por sus siglas en inglés). El 17 de noviembre de 2005, esta designación fue extendida a través de una *Orden Administrativa*, bajo el número de caso JRT-ETC-0001. Posteriormente, mediante *Resolución y Orden* de 14 de noviembre de 2012, se le otorgó un número separado a las operaciones inalámbricas de la Peticionaria, siendo este el JRT-ETC-A001.

En atención a lo dispuesto en la Sección 9.8 del *Reglamento sobre Servicio Universal*, Reglamento Número 7795 (Reglamento 7795), el 2 de abril de 2018, PRTC presentó *Moción Solicitando Revisión de Designación como Compañía de Telecomunicaciones elegible al Amparo de la sección 9.8 del Reglamento sobre Servicio Universal* (Solicitud de Revisión de Designación) ante esta Junta. En la misma, nos solicitó que se le conceda la revisión de designación como ETC, para continuar proveyendo servicio Lifeline a consumidores de bajos ingresos en Puerto Rico y para continuar participando del programa de alto costo federal (Frozen High Cost Support)¹. Nos solicitó, además, conforme al Artículo II-7(b)(2) de la Ley 213-1996, según enmendada, 27 L.P.R.A. sec. 267(b)(2), que se le proveyera trato confidencial al Plan de Mejoras 2018-2022 que incluyó como Anejo 3.

El 5 de junio de 2018, mediante *Resolución y Orden* atendimos preliminarmente la *Solicitud de Revisión de Designación* presentada por PRTC. Concedimos trato confidencial a la misma y nos reservamos la determinación, hasta tanto la Peticionaria cumpliera con presentar, en un término de quince (15), la información adicional solicitada. Indicamos que la Junta tendría cuarenta y cinco (45) días, contados a partir de la fecha en que PRTC sometiera toda la información requerida, para completar su revisión de designación como ETC.

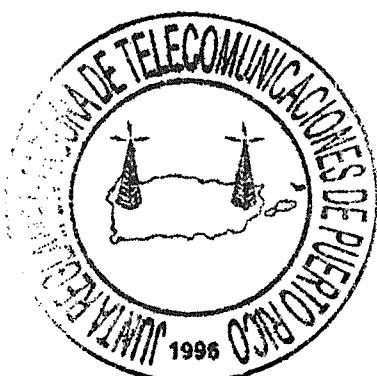
El 20 junio de 2018, PRTC presentó *Moción en Cumplimiento con la Resolución y Orden de 5 de junio de 2018 sobre Revisión de Designación como Compañía de Telecomunicaciones Elegible al Amparo de la Sección 9.8 del Reglamento sobre Servicio Universal*. Acompañó con su escrito la información requerida y solicitó nuevamente la revisión de su designación como ETC.

Discusión:

La Sección 9.8.1 del Reglamento 7795 establece que:

- 9.8.1. *Con el propósito de mantener vigente su designación, que les acredita para recibir apoyo del Fondo de Servicio Universal Federal y de Puerto Rico, las ETCs designadas antes de la vigencia de este Reglamento y aquellas que en el futuro sean designadas, deberán demostrar que están utilizando los fondos para el propósito del Servicio Universal. A esos efectos, demostrarán a esta Junta, mediante la data requerida, que los fondos del Servicio Universal compensan costos para proveer, mantener y actualizar las facilidades, menos los ingresos de telecomunicaciones recibido por las compañías.*

¹ Con la llegada del Connect America Fund, el apoyo existente del Programa de Alto Costo (High Cost Program) fue congelado conforme a los niveles de apoyo recibidos en el año 2011. Cambios adicionales fueron implementados a los programas existentes para comenzar la transición de Servicio Universal, de apoyar únicamente servicios de voz, a expandir el apoyo a servicios de acceso a Internet de banda ancha. Véase, 47 C.F.R. § 54.307(e).



La revisión de la designación se llevará a cabo cada dos (2) años, comenzando en el año 2010. La información dispuesta en esta Sección será sometida a la Junta, el día 1ero de abril de cada año en que se lleva a cabo el proceso de revisión de designación.

Además, deberán someter evidencia de cumplimiento con los requisitos adicionales, dispuestos en la Sección 9.3 de este Reglamento.

En el descargo de su responsabilidad, esta Junta ha revisado la información sometida por la peticionaria en sus escritos de 2 de abril de 2018 y 20 de junio de 2018 y determina que cumple con los requisitos aplicables en el Reglamento 7795, al igual que los dispuestos en las *Enmiendas Provisionales al Reglamento sobre Servicio Universal*, Reglamento Núm. 8093 (Reglamento 8093) y los criterios adicionales adoptados por el Código de Reglamentación Federal en su Sección 54.202 (47 C.F.R. § 54.202) para extender su designación como ETC.

Las designaciones de PRTC serán para recibir dinero del Fondo de Servicio Universal Federal (FSUF) ya que su solicitud de recibir fondos del FSUPR será atendida en otro proceso administrativo, conforme indicáramos en nuestra *Resolución y Orden* de 5 de junio de 2018.

Tomamos conocimiento sobre las circunstancias particulares por las cuales no puede eliminar la mención del programa de seguro social suplementario (SSI) de su material publicitario. Aceptamos como una alternativa razonable, que se incluya la mención del programa de SSI con la salvedad de que no está disponible en Puerto Rico.

Orden:

En consideración de lo antes mencionado, esta Junta RESUELVE y ORDENA:

A la solicitud de trato confidencial: HA LUGAR y se concede esta protección a la Revisión de Designación en su totalidad.

Se toma conocimiento de lo informado referente a su material publicitario y se permitirá la mención del programa SSI con la salvedad de que el mismo no está disponible en Puerto Rico.

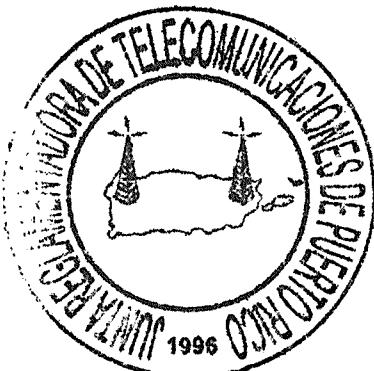
A la solicitud de Designación como ETC de Puerto Rico Telephone Company, Inc. h/n/c Claro, para el periodo de 2018-2020: HA LUGAR.

Se EXTIENDEN las designaciones JRT-ETC-0001 y JRT-ETC-A001 a favor de la Peticionaria como ETC para recibir apoyo del Fondo de Servicio Universal Federal.

SE ADVIERTE a PRTC que deberá utilizar los formularios únicos adoptados por USAC, formularios FCC-5629 (Forma de Aplicación), FCC-5630 (Forma de Recertificación) y FCC-5631 (Hoja de Hogar), comenzando el 1ro de julio de 2018 para el programa Lifeline en Puerto Rico.

Disponiéndose, que cualquier parte adversamente afectada por la presente Resolución y Orden podrá presentar una moción de reconsideración en la Secretaría de la Junta Reglamentadora de Telecomunicaciones de Puerto Rico (“Junta”), dentro del término de veinte (20) días, contados a partir del archivo en autos de la notificación de esta orden. La parte peticionaria deberá enviar copia de tal escrito, por correo, a las partes que hayan intervenido en los procedimientos del caso.

La Junta deberá considerar dicha moción de reconsideración dentro de los quince (15) días de haberse presentado la misma. Si la rechazare de plano o no actuare dentro de los quince (15) días, el término de treinta (30) días para solicitar revisión judicial, comenzará a correr nuevamente desde que se notifique dicha denegatoria o desde que expiren esos quince (15) días, según sea el caso. Si se tomare alguna determinación en su consideración, el término para



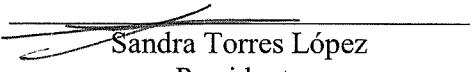
solicitar revisión empezará a contarse desde la fecha en que se archive en autos una copia de la notificación de la resolución u orden de la Junta resolviendo definitivamente la moción. Tal resolución u orden deberá ser emitida y archivada en autos dentro de los noventa (90) días siguientes a la presentación de la moción de reconsideración. Si la Junta acogiere la moción de reconsideración, pero dejare de tomar alguna acción con relación a dicha moción dentro de los noventa (90) días de haber sido radicada, perderá jurisdicción sobre la misma y el término para solicitar la revisión judicial ante el Tribunal de Apelaciones de Puerto Rico, empezará a contarse a partir de la expiración de dicho término de noventa (90) días, salvo que la agencia, por justa causa y dentro de esos noventa (90) días, prorrogue el término para resolver por un período que no excederá de treinta (30) días adicionales.

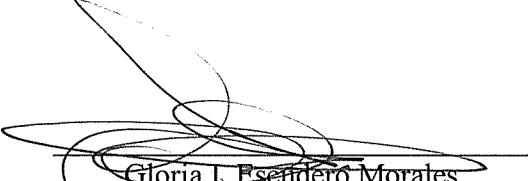
No obstante, la Junta podrá acoger o tomar una determinación sobre una moción de reconsideración presentada oportunamente, aún después de los quince (15) días de haberse presentado la misma, siempre y cuando no haya transcurrido el término para acudir en revisión judicial y no se haya presentado tal recurso de revisión. La Junta también podrá reconsiderar, a iniciativa propia, la presente Resolución y Orden, mientras no haya transcurrido el término para acudir en revisión judicial y no se haya presentado tal recurso de revisión.

Si la parte adversamente afectada por la presente orden o resolución final optare por no solicitar su reconsideración, de conformidad con lo dispuesto en la Sección 3.15 de la Ley Núm. 38-2017, conocida como la Ley de Procedimiento Administrativo Uniforme del Gobierno de Puerto Rico podrá presentar una solicitud de revisión ante el Tribunal de Apelaciones de Puerto Rico con competencia, dentro de un término de treinta (30) días, contados a partir de la fecha del archivo en autos de la copia de la notificación de la orden o resolución final de la Junta. La parte notificará la presentación de la solicitud de revisión a la Junta y a todas las partes dentro del término para solicitar dicha revisión. La notificación podrá hacerse por correo. Disponiéndose que, si la fecha de archivo en autos de copia de la notificación de la orden o resolución final de la Junta es distinta a la del depósito en el correo de dicha notificación, el término de treinta (30) días para solicitar revisión judicial se calculará a partir de la fecha del depósito en el correo.

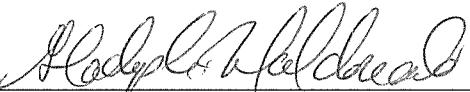
NOTIFÍQUESE la presente ORDEN ADMINISTRATIVA a la peticionaria, Puerto Rico Telephone Company, Inc. h/n/c Claro, a través de su representante legal, Lcdo. Carlos D. Ruiz Mantilla, Depto. Legal, Contratos y Reglamentario, PO Box 360998, San Juan, PR 00936-0998.

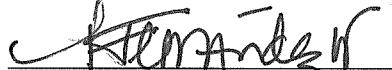
Así lo acordó la Junta el 24 de julio de 2018.

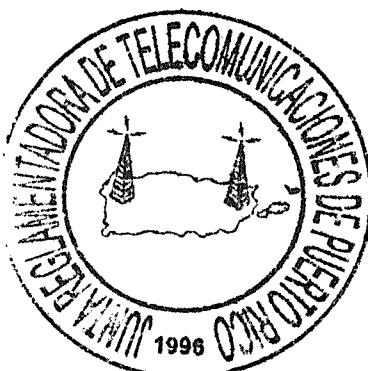

Sandra Torres López
Presidenta


Gloria I. Escudero Morales
Miembro Asociada


Hiram Martínez López
Miembro Asociado


Gladys A. Maldonado Rodríguez
Miembro Asociada


Alexandra Fernández Navarro
Miembro Asociada



CERTIFICACIÓN

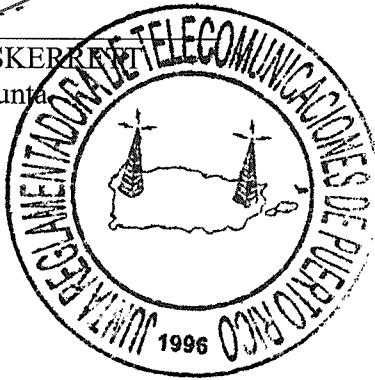
CERTIFICO que la presente es copia fiel y exacta de la Orden Administrativa aprobada por la Junta, el 24 de julio de 2018. CERTIFICO, además, que hoy 24 de julio de 2018, he remitido copia de la presente Orden Administrativa a las partes indicadas en el Notifíquese y he procedido al archivo en autos de la misma.

Y PARA QUE ASÍ CONSTE, firmo la presente en San Juan, Puerto Rico, hoy 24 de julio de 2018.



MARCUS R. TORRES SKERRETT

Secretario de la Junta



**Application of Puerto Rico Telephone Company, Inc.
The Uniendo a Puerto Rico Fund, WC Docket No. 18-143
Attachment to FCC Form 5634**

**Item 28.A – Network Plan, Technology Description
and System Design Documentation: Initial Overview**

To meet its deployment obligations under the Uniendo Fund, Puerto Rico Telephone Company (PRTC) proposes to use a combination of Gigabit Passive Optical Network (GPON) and fixed wireless (FWA) for the last mile connections to customer locations. Fiber-to-the-Premises (FTTP)/GPON technology will be deployed to the majority of locations in most municipios included in PRTC's application. FWA will be deployed in areas where the construction of GPON is not economically viable even assuming the receipt of support equal to the Commission-determined reserve price.

Customers subscribing to PRTC's GPON service will be capable of selecting plans with up to 1 Gbps service. For municipios projected to have 100% GPON deployment PRTC will select the Tier 1 (1 Gbps\500 Mbps) network performance level. For municipios with locations in areas served by GPON and FWA, FWA locations would be able to enjoy up to 100 Mbps/20 Mbps service, while GPON areas will have 1 Gbps/500 Mbps. While the majority of locations in most municipios included in this application will be served with GPON, for those municipios with at least one location served by FWA, PRTC will select the Tier 2 (\geq 100/20 Mbps) network performance level. Both the fixed wireless and GPON solutions will meet the Commission's low latency (\leq 100 ms) requirement. With the exception of certain pole attachments and submarine cable links to the islands of Vieques and Culebra leased from Puerto Rico's electric utility, the equipment and facilities described in this proposal to provide GPON voice and broadband services will be owned by the Company. For FWA, all the electronic equipment is owned by PRTC while a portion of the physical (self-supported towers and monopoles) infrastructure is owned by third parties.

The Network Design Detailed Description document attached to this application provides a detailed description of the technologies, designs, and equipment PRTC is currently

using and plans to use in GPON and FWA deployments in all municipios included in this application. It covers the deployment of last and middle mile facilities, as well as PRTC's core network equipment and facilities necessary for the provision of voice and broadband services. It also presents the general rules of thumb followed by PRTC's engineers, designers, and construction crews in the deployment of the network facilities necessary to meet the requisite performance requirements for all locations within a municipio. The document is made up of the following sections:

- ❖ Section 1: GPON Last Mile Design and Description
- ❖ Section 2: Fixed Wireless Access Design and Description
- ❖ Section 3: Middle Mile/Backhaul Design and Description
- ❖ Section 4: Internet Core Network Design and Description
- ❖ Section 5: Voices Services Design and Description
- ❖ Section 6: Resiliency and Redundancy of the PRTC Network
- ❖ Section 7: Municipio-Level Network Design and Description

Section 1 provides a detailed description of PRTC's design for GPON last mile deployment. The GPON design framework described below is based primarily on the Company's experience in deploying GPON technologies. PRTC has been deploying GPON extensively over the last few years and currently has GPON-based service available to well over 200,000 customer locations. From this experience the Company has refined its processes and procedures for the design, construction, and operation of GPON last mile networks. The expected number of locations served by each technology and the municipio-specific network characteristics are described in more detail in Section 7 (Municipio-Level Network Design and Description) for each municipio included in PRTC's application.

Section 2 describes PRTC's proposed FWA network that will provide broadband and voice service to locations within individual municipios where FTTP/GPON will not be deployed. Section 7 - Municipio-Level Network Description describes for each municipio the number locations and areas where FWA will be deployed.

Section 3 - Middle Mile/Backhaul Design and Description presents a detailed description of PRTC's DWDM/IP MPLS middle mile transport network that connects GPON and FWA access nodes to the core network. PRTC currently operates a largely redundant middle mile (host/remote and backbone fiber rings) transport network consisting of approximately 1,963 miles of fiber optic cable. All host central offices and the voice and internet cores are connected to PRTC's fiber ring network with diverse routing for full redundancy. Many of PRTC's remotes also have redundant connections to the network cores with plans to add route diversity to additional remotes as part of its Uniendo Fund construction. As an appendix to Item 28 PRTC has included a network diagram electronic shape file that will allow Commission Staff to view PRTC's fiber connections to its host and remote offices at the municipio level.

Since Hurricane Maria PRTC has been working on several initiatives to improve network reliability and resiliency. The Company has invested over \$10 million dollars to further harden its middle mile network and has built and activated 604,034 feet of additional underground fiber as part of its main fiber rings. Currently, the backbone fiber rings are fully redundant and PRTC plans is to fully replace the remaining aerial fiber segments with underground fiber by the end of the six-year Uniendo construction period.

Route diversity and failure resistant technology allows for continuous traffic flow in the event of fiber cuts and failures. As described in Section 3, PRTC's current middle mile network will be enhanced with proposed investments intended to increase the redundancy and resiliency of the network. Location specific middle mile route mileage and diversity is discussed in the municipio-level descriptions found in Section 7.

PRTC's internet core is described in detail in Section 4 which includes a diagram showing all links between major nodes and the redundant core locations at PRTC's Bayamon and Caparra central offices. PRTC's network currently provides data services through four access methods: FWA access, GPON access, xDSL access and Enterprise Customer access through dedicated lines. The current network evolution, expected to be intensified

to meet Uniendo Fund deployment obligations, will emphasize GPON and fixed wireless access and will phase out xDSL access for residential and small business locations. Large business customers will continue to be served through enterprise dedicated lines.

Like PRTC's middle mile network, the internet core is mostly in-place with minimal additional investment required to meet the performance obligations that would result from PRTC's Uniendo Fund application. The throughput capacities for the major network nodes are found in Section 4. All PRTC central offices, major nodes and access nodes are connected to the two redundant internet core locations with multiple routes and, to ensure reliability, all network elements are accessed and monitored constantly at the Company's Network Operations Center (NOC). PRTC has included as an appendix to Item 28.b a list of the addresses and/or coordinates for the PRTC Caparra, Bayamon and Santurce central offices where the major nodes are housed in the Company's internet and voice cores.

The provision of Voice Services in PRTC's network are described in Section 5. For the GPON network, the Company currently has redundant Ribbon C20 soft switches installed at the Caparra and Santurce central offices to provide voice services. For the FWA network, the company will provide voice services through LTE (VoLTE). Additional equipment is installed at these two offices that allow for the two-way translation of VoIP signals to integrate to the TDM Public Switched Telephone Network (PSTN). These same two offices house the equipment that will manage VoLTE for the FWA network. All PRTC central offices, major nodes and access nodes are connected to the two soft switch locations. An appendix to Item 28 contains a list of address and/or coordinates for all PRTC's central offices, remote offices, and RBS where the major nodes and access nodes are located.

Section 6 describes PRTC's efforts to increase the resiliency and redundancy of its network. Since the two major hurricanes in 2017, PRTC has increased the amount of buried fiber in the network and expanded diverse and redundant routing to connect all access nodes to the internet and voice core network equipment. PRTC continues to

implement designs to increase resiliency, redundancy and scalability to its island-wide main fiber ring that is comprised of just under 100% buried fiber optic cables. The main fiber rings will be 100% buried by the end of the six-year Uniendo construction period.

The central offices and remotes in each municipio included in PRTC's bid will be connected via the middle mile and main fiber rings to the redundant internet and voice core network facilities using diverse routing and intelligent DWDM/IP equipment that will reroute traffic in the event of a failure.

Section 7 -contains a description of the network design for all municipios included in PRTC's application. The description for each municipio includes a breakdown of GPON and FWA service areas and locations, mileage, percentage of aerial and buried last and middle mile plant, and the location and number of access nodes.

Appendix 28.4 is PRTC's Project Plan. This document shows planned deployment of GPON and FWA network facilities by municipio and by month. The build-out plan demonstrates how PRTC intends to meet the required deployment milestones.